

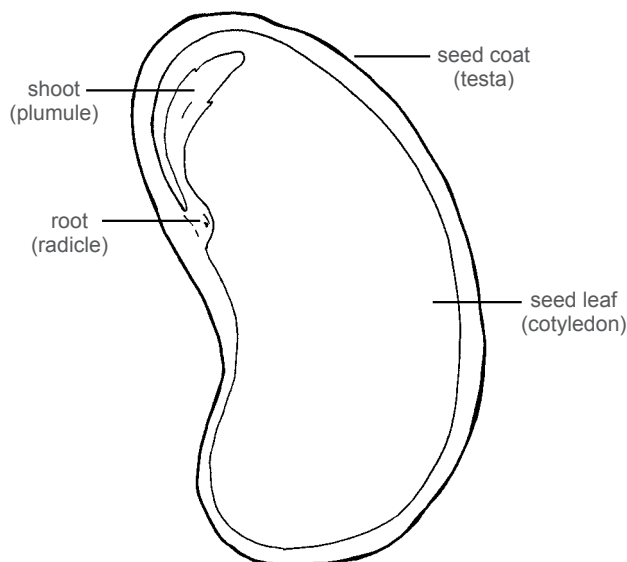


Anatomy of a Seed

Forming a seed is the way a plant stores energy and genetic material for regeneration. Seeds contain everything a new plant needs to grow.

Every seed has four main elements:

- Seed coat – the tough outer coating of a seed that protects the parts inside. It's also known as the *testa*.
- Shoot – the embryonic stem that contains one or two foliage leaves. It's also known as the *plumule*.
- Root – the first fine root is also called a *radicle*. The very first signs of germination are the seed coat splitting open, and the radicle digging down into the soil. All future roots will grow from this root.
- Seed leaf – there are two very small leaves waiting inside most seeds (some seeds, like grasses, have only one leaf). These are also known as *cotyledons*, and contain the food source for the new plant.



Equipment:

- Anatomy of a Seed image with labels (as above)
- Scalpel
- Broad bean seeds
- Magnifying glass
- Anatomy of a Seed – Worksheet, one per student
- Pencils

What to do:

1. Draw on a board, or copy, the image of the seed above.
2. Review the parts of the seed and discuss them with your students.
3. Ask: *Have you ever seen a root emerging from a seed? Have you seen a bud appearing?*
4. Using the scalpel, slice some broad beans in half to form two wide, flat cross-sections. Pass them around the group.
5. Look at the cross-sections under the magnifying glass.
6. Hand around the worksheets.
7. Ask students to find and identify the four parts of the seed named in the diagram.
8. Talk about the different seeds you have grown and discuss the different sizes, shapes and colours of seeds you have seen.
9. Ask students to test their knowledge by filling in the parts of a seed on the image on the worksheet.

You can read more about how seeds are fertilised in the 'Life Cycle of a Plant' fact sheet on the Shared Table Resource Library.



ANATOMY OF A SEED – WORKSHEET

Fill in the names of each part of a seed on the drawing below.

